Amendments to the Specification

Please replace the paragraph on page 8, at indicated lines 7 – 24 with the following paragraph:

The present invention is directed to a multipath incubator system for use in such an automated analyzer. Figure 2 shows a single continuous loop incubator embodiment of such a multipath incubator. A test vessel is presented to the multipath incubator at the vessel delivery station 201. The test vessel may contain a solid phase reagent or may be empty. The test vessel is moved along a transporter device such as the incubator belt 202, comprising a plurality of vessel holding members 207. On the incubator belt 202, the test vessel is positioned so that it is centered over the belt in order to eliminate variation of speed as the vessel travels around corners. The test vessel is moved to a pipetting station 203 where liquid is added. The liquid that is added may include biological sample (e.g., blood, plasma, urine, etc.), or diluted biological sample, or liquid reagent. The type and quantity of the added liquid is dependent upon the type of assay being performed. The test vessel is moved around the incubator belt 202 for a period of time specified for the individual assay. As the test vessel is moved along the incubator belt 202, the test vessel is agitated by one or more agitator assemblies 204. The agitator assembly 204 is described in more detail in the co-pending application Babson et al. Ser. No ~~10/_____~~, 10/813,576, "Vessel Agitator Assembly. The multipath incubator is preferably contained within a housing (not shown) that is maintained at 37°C ± 0.1°C. The test vessel progresses around the

incubator belt 202 until it is scheduled to enter a wash station 205 or a transfer station 206.

Please replace the paragraph on page 10, at indicated lines 5 – 27 with the following paragraph:

Test vessels are washed via axial centrifugation. As illustrated in Figure 3A and B, the test vessel 33 is shuttled into the wash station 305 and positioned in support shelf 310. After the test vessel 33 is positioned in the support shelf 310 (as in Figure 3B), support shelf 310 is lowered, thereby moving test vessel 33 down and allowing retraction of the shuttle 30. After retraction of shuttle 30, support shelf 310 is raised to its previous position (as in Figure 3B). Wash module (sump housing) 35 preferably comprises an angled, splined gear, surrounded by a sump receptacle and a test vessel lifter (not shown). The test vessel lifter is raised to engage the bottom of the test vessel 33, which is raised out of the support shelf 310 and into the wash module 35. Test vessel 33 is then engaged by a bevel gear (not shown) and spun at high speed several times, with five times being preferred. The first spin removes the sample and reagent mixture. Water and/or wash fluid is dispensed into the test vessel prior to the follow-on (e.g., second, third, fourth, and fifth, etc.) spins. Washing and spinning is repeated several times (e.g. 5 or more times) until the tube and solid phase (bead) is free of non-specifically bound label. Expelled fluids are captured in the sump and drained away (drain tube not shown). After sufficient washing, the tube is lowered to again engage the support shelf 310 which is then lowered to allow the shuttle 30 to be repositioned over the tube 33.

Support shelf 310 is then raised to the initial position to allow the shuttle 30 to retract test vessel 33 back onto the incubator belt 302. Alternatively, with reference to Figure 4, the test vessel may be shuttled onto a second incubator belt 402B if the second incubator belt is to transport the test vessel to the next step of processing. In yet another embodiment, if the assay is complete and the next step is to read the result, the test vessel may be shuttled to a luminometer. The luminometer and its operation are described in more detail in the co-pending application, "Rotary Luminometer," Ser. No. ~~10/_____~~. 10/813,575.

Please replace the paragraph on page 11, indicated lines 27 – 30 with the following paragraph:

Figure ~~6~~ 5 is a table showing an example of the types of assays that may be requested for 5 separate samples, each of which is assayed in a separate test vessel or tube. This table is only used for descriptive purpose and should not be construed as limiting the multipath incubator to only these features, functions, attributes, or tests.

Please replace the paragraph on page 14, indicated line 15 – page 15, indicated line 6 with the following paragraph:

The multipath incubator of the present invention preferably operates in a manner that is depicted schematically as a series of flow charts in Figure 10, where the flow chart in pentagon 10 represents a standard assay procedure, the flow chart in pentagon 11 represents a pretreatment assay process, the flow chart in rectangle 12

represents an incubation process, and rectangle 13 represents a measurement process. The processes are linked to one another and are carried out by software programs that allow a choice of the identity, order and timing of the steps of an assay. A resource allocation algorithm (as described in co-pending U.S. patent application Ser. No. ~~10/_____~~) 10/813,604 is preferably utilized in order to maximize throughput on the instrument. The various sub-schemes can be conveniently understood by considering them one by one. In each schematic process, the steps of the process are given inside the small rectangles located within the flow chart. The pathways for moving from one step to another are represented by arrows, and will typically coincide with physical movement of a sample tube from one section of the instrument to another (e.g. from a pipetting station to a transfer or wash station) by means of a transport device such as an incubator belt. In each of the schematic processes, a "circle containing a vertical line" represents an "or" junction. An "or" junction is a nexus in the process which may be arrived at or exited from by more than one input or output (I/O) path, i.e., it is a point of connection in the process where a choice must be made between various options, or where a choice between various options was made in order to arrive at the junction. This is in contrast to the junctions marked with a "circle with a &", i.e., the "and" junctions. For "and" junctions, all of the possible input and output paths (represented by arrows) to and from that junction must occur. Terminal process steps are indicated by shading of the corresponding rectangle.